

# TANK TIGHTNESS TESTING

## What is it?

- 3 A tank tightness test identifies breaches in a tank that may result in leaks.

## Things to consider

- 3 Tank tightness tests must be performed by an ADEQ certified tightness test service provider. Procedure and personnel, not equipment, are usually the most important factors in a successful tightness test.
- 3 Tank tightness testing is used primarily on tanks 15,000 gallons or less containing gasoline or diesel. If you are considering using tightness testing for larger tanks or other products, discuss the method's applicability with an ADEQ certified tightness test service provider.

## Regulatory requirements?

- 3 The tank tightness test method must be able to detect a leak as small as 0.1 gallon per hour with a probability of detection of 95% and a probability of false alarm of 5%.

## When is it required?

- Ø If tank tightness testing and inventory control are used as a method of **RELEASE DETECTION** then:
- A. New UST systems - *installed after December 1988* - must have tank tightness tests performed every 5 years for 10 years following install.
  - B. Existing UST systems - *installed before December 1988* - having spill, overfill, and corrosion protection must have tank tightness tests performed every 5 years for 10 years following the date of the corrosion protection upgrade or have tank tightness tests every 5 years until December 22, 1998, whichever time period is longer.
- # After the time periods stated in **A** and **B** above, you must have a monitoring method that can be performed at least once per month.
- Ù If there is a **SUSPECTED RELEASE**:
- A. Report it immediately to the LUST Hotline by calling 602-207-4303.
  - B. UST system owners and operators must investigate and confirm all suspected releases. A tank tightness test may be conducted where there are no signs of environmental contamination.
  - C. Submit the results of the tank tightness test along with a 14-day Report to the UST Program.

## How does Tank Tightness Testing work ?

There are two categories of tank tightness tests, volumetric and nonvolumetric:

### VOLUMETRIC

*Definition* - A volumetric tank tightness test measures the change in the volume of fluid in the tank and attributes this change to a leak.

- 4 All volumetric tank test methods must have the capability of detecting leaks as small as 0.1 gallons per hour (gph) with a **probability of detection** of 95% and a **probability of false alarm** of 5%.
- 4 A leak is defined in terms of **flow rate** in gph and can be positive or negative; that is, product can flow out of the tank or groundwater can flow into the tank.
- 4 The question as to whether the tank is leaking or nonleaking is usually made by comparing the flow rate to a predetermined value called the **threshold**. If the flow rate exceeds the threshold, a leak is declared.
- 4 Adequate waiting periods must be observed after any change in product level, whether such a change represents the initial product delivery or a subsequent adjustment (topping off the tank) prior to starting the test.

### NONVOLUMETRIC

- 4 Nonvolumetric methods typically use acoustics or chemical tracers to determine the presence of a breach in the tank.

## Required Documentation

- 4 Show that an ADEQ certified tank tester performed the tank tightness test.
- 4 Save the test results until after the next test.

## Checklist

- " Is the tank service provider certified with ADEQ?
- " Is the test method third party certified for my size tank and product?
- " What is the phase out date for using tank tightness testing and inventory control as a method of release detection?

In the event of any discrepancy between this document and the Arizona Revised Statutes or Rules, the statutes or rules shall prevail.